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"A Miss is as Good as a Mile": Examining Social Distance as a Predictor of Academic Performance in Kentucky

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Abstract: This paper examines social distance and how it relates to academic performance for students in Kentucky high schools. To perform this examination, I ran a series of bivariate regressions of student performance scores and differing variables that account for social distance such as race and/or ethnicity, socioeconomic status, types of classes offered in a school, and, primarily, location of the school. Results showed that as the number of students of color enrolled at a school increases, the gap in performance between groups of traditionally underserved students and non-underserved students increases. This gap also increases as more students are enrolled in Advanced Placement courses. Results also showed significant differences between locales in the performance gap between groups of students, with students in city locales having the largest performance gap, and students in rural areas having the smallest performance gap. This study contributes to the significant body of literature surrounding social distance but is unique in its examination of the subject in this particular fashion.

Keywords and phrases: Social distance, social capital, social isolation, education, rural sociology, urban sociology, Appalachia, Eastern Kentucky

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Introduction

Social distance is the measure of social separation between groups of people caused by real or perceived differences (i.e. "distance") between those groups as defined by social categories such as race and/or ethnicity and socioeconomic status (Crossman, 2019). I will be examining the effect of both of these variables on social distance and how it affects academic performance. Many scholars make a point to define social distance as "opposed to locational distance," however, the primary intention of this paper is to explore how locational distance and social distance can influence one another, particularly in the realm of education.

Background

The concept of distance as both a geographic and metaphoric concept began with a German sociologist named Georg Simmel (Ethington, 1997). Simmel was active in the late 1800s as an academic and professor, and had two students who also became prevalent in the field of sociology: Robert Park and Emory Bogardus. Park and Bogardus both went on to continue Simmel's work in urban sociology, as well as study race relations in the early 1900s, but Bogardus was the one to coin the term "social distance." He created a psychological testing scale cleverly

titled the Bogardus Social Distance Scale. The Bogardus Scale was essentially a survey that attempted to quantify how much individuals were willing to tolerate members of other racial and ethnic groups (Bogardus, 1933). The scale had seven options for each racial/ethnic group that was listed, and each of the options had a numerical value assigned to it for statistical calculation, with 1 being the most accepting, and 7 being the least accepting. Each question asked respondents if they would be willing to accept someone from the group in question as: 1 - “close relatives by marriage,” 2 - “my close personal friends,” 3 - “neighbors on the same street,” 4 - “co-workers in the same occupation,” 5 - “citizens in my country,” 6 - “non-citizen visitors in my country,” and 7 - “would exclude from entry to my country” (Bogardus, 1933). Many have used this scale to replicate Bogardus’ study in areas around the world, and others have used the scale as a basis to create their own (Triandis & Triandis, 1960; Bichi, 2008; Parillo & Donoghue, 2013). Although Bogardus was the one who invented the term “social distance,” he and Park both generally moved away from Simmel’s original concept of metaphorical distance as tied to locational distance.

Other sociological concepts that originated in this time period and are useful in the discussion of social distance are social capital and social isolation. For the purposes of this study, social capital is defined as “the sum of resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance or recognition” (Bourdieu & Wacquant, 1992). Social isolation, in sociology, is a phenomenon in which poor, disadvantaged neighborhoods and communities are

unable to have sustained contact with institutions and individuals that are not of their community, and vice versa (Wilson, 1987; Fernandez & Harris, 1992; Tigges, Browne, & Green, 1998; Rankin & Quane, 2000; Krivo, Washington, Peterson, & Kwan, 2013). This means that individuals from these communities are unable to benefit from the resources that non-disadvantaged neighborhoods have *and* individuals from more advantaged communities do not bring resources *into* disadvantaged communities. Fitzpatrick and LaGory (2011) describe these areas as "risk spaces" and "resource spaces." Poor people of color are disproportionately restricted to "risk spaces" where economic disadvantage and social hazards (such as exposure to toxic chemicals, violence, and stress) are common. Whereas the white upper-middle-class live overwhelmingly in "resource spaces," where they have high-quality infrastructure, services, and other resources that allow them better quality of life and protection from harm.

The interrelatedness of these ideas (social distance, social capital, and social isolation) is all explored thoroughly in Wilson and Taub's *There Goes the Neighborhood* (2006). The book explores tensions between four different neighborhoods in Chicago of different racial, ethnic, and socioeconomic backgrounds. One of the main sources of tension for these neighborhoods were schools. The parents in these neighborhoods simply wanted the best education for their children, but resentment often grew between racial and socioeconomic groups because of this. Many parents of color were upset because white children were able to get a better quality education than their own children; and often,

white parents would perceive any decline in quality at their own child's school as the fault of increased numbers of children of color.

There is less scholarship on the effects of social distance in rural areas (Duncan, 1996; Howley, Rhodes, & Beall, 2009; Hao, 2015). Persistent poverty is an issue for many rural schools, along with a declining population, changing demographics, and ongoing accountability requirements; of the 386 counties in the nation that have sustained poverty levels of 20% or higher since 1970, 95% are rural (Howley et al., 2009). Duncan (1996) found that persistent, inter-generational poverty continues in rural communities because the political economies of these areas often depend on low wages and "extreme control over labor," that generates a rigid stratification. Additionally,

> This structure of inequality determines social interaction and the allocation of opportunities in rural communities, impeding upward mobility, and reduces investment and trust in social institutions, blocking development.

This is especially common in coal-mining communities, which there are a number of in rural Eastern Kentucky. Oftentimes, big coal companies will prevent their workers from unionizing to exert power over them, both financially and socially (Bell, 2009; Hao, 2015). As mentioned above, these companies depend on low wages and extreme control of labor to financially benefit themselves, keeping rural communities and their people in poverty.

One well-recorded issue in rural areas that relates to the concept of social distance is a phenomenon called “brain drain.” Brain drain is defined as “a situation in which large numbers of educated and skilled people leave their own country or area to live and work in another one where they can earn more money and conditions are better” (Brain Drain, n.d.). This phenomenon is common in Appalachia, and well documented (Artz, 2003; Petrin, Farmer, Meece, & Byun, 2011; Petrin, Shafft, & Meece, 2014; Vazzana & Rudi-Polloshka, 2019). When well-educated people leave their rural community, they are increasing their own opportunities, but potentially decreasing the social capital of their community. More educated teachers typically leave rural areas, leaving students with poorer quality of education, and the cycle begins anew. Evidence suggests that students who perceive a higher likelihood of career opportunities and higher salaries outside of the Appalachian region are more likely to leave it (Vazzana & Rudi-Polloshka, 2019). The suggestion is that “brain drain is not an inherent problem for rural counties, but something that might be overcome with properly designed, well-informed policies” (Artz, 2003).

Social Distance in Education

Social distance is perhaps most evident in education. Between school zoning, brain drain, types of courses offered, and the racial and ethnic makeup of schools, it is no surprise that schools exacerbate the social distance between students that persist into their adulthood. For example, white students of higher socioeconomic status are disproportionately enrolled in Advanced Placement (AP) courses (Klugman, 2013). AP courses can be used for college credit and can

be an important part of the selection process for many colleges in the United States. There is a fee to take the standardized AP test for each class, and the class cannot count for college credit unless you take the test and make a sufficient score. Students in families who are unable to afford this fee are undeniably at a disadvantage. Additionally, teachers who teach AP classes have to go through special training that costs the school money, so if a school in a socioeconomically disadvantaged area does not have the money to send any of its teachers to training, none of the students have the opportunity to take an AP course, regardless of financial status or academic ability. Because of this, schools in rural areas and poor inner-city communities are at a disadvantage *in addition to* their socioeconomic status and location when they start their post-high school lives. This is not to say that students from less privileged economic backgrounds always perform worse than students from non-economically disadvantaged backgrounds (Hoxby & Avery, 2013), but that students who have more money also have access to higher quality educational resources as well as more parental investment in education (Roscigno, Tomaskovic-Devey, & Crowley, 2006). Klugman suggests that "the robust disparities in AP offerings and enrollments indicate that inequalities of educational opportunity are symptoms of deeper structural inequalities between families" (2013). This rings true in much of the literature on inequality in AP courses, and education at large (Zhang, 2008; Foust, Hertberg-Davis, & Callahan, 2009; Schneider, 2009; Gagnon & Mattingly, 2016). In interviews with students enrolled in AP or IB (International Baccalaureate, a similar but unaffiliated program for "gifted students") programs, Foust et al. found that

> As the amount of time students spent in homogenously grouped settings increased, so did the workload, the intensity of the perceived range of negative feelings between participants and non-participants, and the perceived negativity of participant stereotypes.

Essentially, as students were increasingly separated into "gifted" (AP and IB) and non-gifted programs, the perceived animosity between participants and non-participants increased. This is a prime example of a school system not only displaying social distance, but emphasizing and exacerbating it. As Schneider (2009) points out himself, the history of AP courses is inherently elitist. AP was established as a way for gifted students to set themselves apart from their peers and challenge themselves. As these students gained advantages for being in these advanced classes, less privileged schools attempted to catch up, and offered AP classes for their students, although in much lower numbers. However, over time, AP has become less of an elite distinction than it once was, so "gifted" students, (and teachers of gifted students) are now searching for new ways to set them apart from other students. Gagnon and Mattingly (2016) found that rural students are "meaningfully less likely to take AP coursework than their urban and suburban peers, even when AP courses are available at their schools."

Another structural inequality in school systems is referred to as "white flight." White flight, in education, "refers to the decreasing white enrollment in poor-performing, inner-city, public schools" (Zhang, 2008). It has been found that, in addition to the trend of white families moving from poorly performing inner city schools to "better" performing suburban schools, public schools with poor

academic performance lost white students regardless of their locality (Zhang, 2008).

The offering of AP courses is not the only way social distance affects students, however. School type can also increase social distance between students, which is a portion of the reason that only traditional public schools were included in this study (Lee, Weis, Liu, & Kang, 2017; Riel, Parcel, Mickelson, & Smith, 2018). Lee et al. (2017) found that students that attended urban comprehensive public schools, suburban disadvantaged schools, and rural schools were less likely to be accepted to colleges than students that attended urban magnet test-in schools, suburban advantaged schools, Catholic schools, and independent private NAIS schools, even when these students have a similar level of academic qualifications, GPA, and college entrance exam scores. Similarly, Riel et al. (2018) found that "magnet schools often encourage racial and class diversity, while charters contribute to racial and socioeconomic isolation."

Keeping all of these factors in mind, I moved forward to examine the effects of race and/or ethnicity, socioeconomic status, the offering of AP courses, and, primarily, a school's location, all qualities of educational social distance, on students' academic performance.

Current Study

The main goal of this study is to examine social distance *between* schools, as opposed to *within* them, and how locational distance plays a role in social distance in education. Despite the fact that social distance largely has to do with

how one group *feels* about another and how they perceive the differences between them, there is quantitative data that point to the effects of social distance and social isolation. This quantitative data will be the basis of the measure of social distance used in this study.

Big Questions

In this study, I examine several major questions about the relationship between social distance and academic performance in Kentucky. First, what is the effect of a student's race or ethnicity on their academic performance? Second, what is the effect of a student's economic status on their academic performance? Finally, what is the effect of school locale on a student's academic performance? To answer these questions, I used public data from the U.S. News & World Report Best High Schools Rankings and the National Center for Education Statistics. My hypotheses are fivefold:

H1: Black students and Hispanic/Latine students will have lower academic performance than their white peers.

HA: There is no difference between the academic performance of black students, Hispanic/Latine students, and white students.

H2: Students of lower socioeconomic status (as defined by the NSLP) will have lower academic performance than students with higher socioeconomic status.

HA: There is no relationship between the socioeconomic status of a student and academic performance.

H3: Schools in City Locales will have a larger gap in performance between underserved and non-underserved students than other types of locales.

HA: There is no relationship between a school's setting and academic performance.

H4: Schools in Appalachian counties will have smaller performance gaps between underserved and non-underserved students than schools in non-Appalachian counties.

HA: There is no relationship between Appalachian counties and academic performance.

Methods

Data was collected from the U.S. News website in 2018 for the 2017-2018 school year for all information regarding academic performance, demographics, setting, and other school-specific data. Private schools, charter schools, alternative schools/detention centers, and online school programs were excluded from the dataset. This left 227 cases for analysis. Definitions for locational terms were found from the National Center for Education Statistics (NCES).

Variables

Appalachian county: This variable was coded as a dichotomous dummy *maybe explain what this means somewhere? (0,1) in which schools located in Appalachian counties were coded as 1, and schools NOT located in Appalachian counties were coded as 0.

Percent white students: The percent of white students enrolled in a school for the 2017-2018 school year. This is used as a comparison variable for black students and Hispanic/Latine.

Percent black students: The percent of black students enrolled for the 2017-2018 school year.

Percent Hispanic/Latine: The percent of Hispanic/Latine students enrolled for the 2017-2018 school year.

Percent Advanced Placement (AP) participation: The percentage of students enrolled in at least one Advanced Placement course in the 2017-2018 school year.

Percent of economically disadvantaged students: Economic disadvantage was defined by participation in the Free and Reduced-Price Lunch program in the 2017-2018 school year. Free and Reduced-Price Lunch (FRPL) is given to students who demonstrate financial need as determined by the National School Lunch Program (NSLP). There are debates in the literature as to whether or not participation in the FRPL is a valid measure of disadvantage, but it is suitable for the purpose of this study (Domina et al., 2018).

Underserved student performance gap: This is the average difference in report card scores between underserved students and non-underserved students. U.S. News defined underserved students as those who are black, Hispanic/Latine, and/or economically disadvantaged.

City locale variable: This variable is a combination of all locales considered "cities" (large city, midsize city, and small city) by the National Center for Education Statistics. For clarity, "to qualify as an urban area, the territory must encompass at least 2,500 people, at least 1,500 of which reside outside institutional group quarters. Urban areas that contain 50,000 or more people are designated as Urbanized Areas (UAs)," and a Principal City is an "incorporated place with a large population of residents and workers located within a [Core Based Statistical Area] CBSA" (Geverdt, 2015). A CBSA "is a geographic entity associated with at least one population core of 10,000 or more, plus adjacent territory that has a high degree of social and economic integration with the core, as measured by commuting ties" (Geverdt, 2015). A large city is defined as a "territory inside an Urbanized Area and inside a Principal City with [a] population of 250,000 or more" (Geverdt, 2015). A midsize city is defined as a "territory inside an Urbanized Area and inside a Principal City with [a] population less than 250,000 and greater than or equal to 100,000." (Geverdt, 2015). A small city is defined as a "territory inside an Urbanized Area and inside a Principal City with [a] population less than 100,000" (Geverdt, 2015). The city locale variable includes any schools that are located in areas that meet any of these three guidelines.

Suburb locale variable: This variable is a combination of all locales considered "suburbs" (large suburb, midsize suburb, and small suburb) by the NCES. A large suburb is defined as a "territory outside a Principal City and inside an Urbanized Area with [a] population of 250,000 or more" (Geverdt, 2015). A midsize suburb

is defined as a “territory outside a Principal City and inside an Urbanized Area with [a] population less than 250,000 and greater than or equal to 100,000” (Geverdt, 2015). A small suburb is defined as a “territory outside a Principal City and inside an Urbanized Area with [a] population less than 100,000” (Geverdt, 2015). The suburb locale variable includes any schools that are located in areas that meet any of these three guidelines.

Town locale variable: This variable is a combination of all locales considered “towns” (fringe town, distant town, and remote town) by the NCES. For clarity, urban areas that contain at least 2,500 and less than 50,000 people are designated as Urban Clusters (UCs). A fringe town is defined as a “territory inside an Urban Cluster that is less than or equal to 10 miles from an Urbanized Area” (Geverdt, 2015). A distant town is defined as a “territory inside an Urban Cluster that is more than 10 miles and less than or equal to 35 miles from an Urbanized Area” (Geverdt, 2015). A remote town is defined as a “territory inside an Urban Cluster that is more than 35 miles from an Urbanized Area” (Geverdt, 2015). The town locale variable includes any schools that are located in areas that meet any of these three guidelines.

Rural locale variable: This variable is a combination of all locales considered “rural” (fringe rural, distant rural, and remote rural) by the NCES. For clarity, the census bureau defines a rural area as any population, housing, or territory *not* in an urban area. A fringe rural area is defined as a “census-defined rural territory that is less than or equal to 5 miles from an Urbanized Area, as well as rural territory that is less than or equal to 2.5 miles from an Urban Cluster” (Geverdt,

2015). A distant rural area is defined as a "census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an Urbanized Area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an Urban Cluster" (Geverdt, 2015). A remote rural area is defined as a "census-defined rural territory that is more than 25 miles from an Urbanized Area and also more than 10 miles from an Urban Cluster" (Geverdt, 2015). The rural locale variable includes any schools that are located in areas that meet any of these three guidelines.

Statistical Approach

Bivariate regression provides a useful approach to examining the relationships stated in my hypotheses. In this analysis, I will create nine models with bivariate regression. Bivariate regression analyzes two variables to established the strength of the relationship between them. Models 1 and 2 will examine the relationship between race/ethnicity and academic performance (Table 2.1). Model 3 will examine the relationship between socioeconomic status and academic performance (Table 2.1). Model 4 will examine the relationship between AP participation and academic performance (Table 2.1). Models 5 through 8 will examine the relationship between school locale and academic performance (Table 2.2). Model 9 will examine the relationship between being in an Appalachian county and academic performance (Table 2.2).

Results

Table 1 contains descriptive statistics for the variables in this study. Around 37% of high schools in Kentucky are located in an Appalachian county. Unsurprisingly, the racial and ethnic demographics of schools in Kentucky are predominantly white (around 84% of students), with black students at approximately 8%, and Hispanic/Latine students at around 3.7%. Students of other racial/ethnic backgrounds were found in extremely small numbers and therefore, not tested statistically. Nearly 30% of students in Kentucky participate in at least one Advanced Placement course during their high school education. Over *half* of the students in the state of Kentucky are considered economically disadvantaged. On average, students who are considered "underserved" performed 12 points worse on report cards than their non-underserved peers. Most schools in Kentucky are located in Rural Locales, at about 44%, and the least common locale for schools was in Cities, at just under 10%.

Table 2.1 includes linear regressions of variables impacting underserved student performance, including racial/ethnic demographics and AP participation. In Model 1, as the percentage of black students increases by one percent, the difference in performance between underserved and non-underserved students changes by -0.15 points (p=0.001). In Model 2, as the percentage of Hispanic/Latine students increases by one percent, the difference in performance between underserved and non-underserved students changes by -0.878 points (p=0.001). In Model 3, as the percentage of economically disadvantaged students increases by one percent, the difference in performance between underserved and non-underserved students changes by 0.215 points (p=0.001). In Model 4, as

the percentage of Advanced Placement participation increases by one percent, the difference in performance between underserved and non-underserved students changes by -0.147.

Table 2.2 includes linear regressions of variables impacting underserved student performance, using variables tied to location. Model 5 demonstrates that the underserved student performance gap in City Locales increases by -7.699 points from the state average (p=0.001). Model 6 demonstrates that the underserved student performance gap in Suburban Locales increases by -2.313 points from the state average, though this finding is not statistically significant. Model 7 demonstrates that the underserved student performance gap in Town Locales increases by -1.225 from the state average, though this finding was also not statistically significant. Model 8 demonstrates that the underserved performance gap in Rural Locales actually decreased by 5.576 from the state average (p=0.001). Model 9 demonstrates that the underserved student performance gap also decreased, by 5.529, from the state average (0.001). Figure 1 offers a visual display for the numbers in Table 2.2 and how they differ from each other. All tables and figures are on the following pages.

Table 1 - Descriptive Statistics

Variable	**Mean**	**St. Dev.**	**Min**	**Max**	**Obs**
Appalachian County	0.3728	0.4846	0	1	228
Percent White Students	84.23	17.586	7	100	228
Percent Black Students	8.57	13.37	0	83	228
Percent Hispanic/Latine Students	3.719	3.813	0	22	228
Percent Advanced Placement (AP) Participation	29.42	20.735	0	88	228
Percent of Economically Disadvantaged Students	55.94	15.538	5	88	228
Underserved Student Performance Gap	-12.091	8.7316	-40.3	48.9	205
City Locale	0.0965	0.29591	0	1	228
Suburb Locale	0.1842	0.38851	0	1	228
Town Locale	0.2807	0.45033	0	1	228
Rural Locale	0.4386	0.49731	0	1	228

Table 2.1 - Bivariate Regression of Variables Impacting Underserved Student Performance: Demographics and Advanced Placement (Standard Deviation in Parentheses)

Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Percent Black	-0.153*** (0.043)	-	-	-
Percent Hispanic/Latine	-	-0.878*** (0.145)	-	-
Economic Disadvantage	-	-	0.215*** (0.038)	-
AP Participation	-	-	-	-0.147*** (0.028)

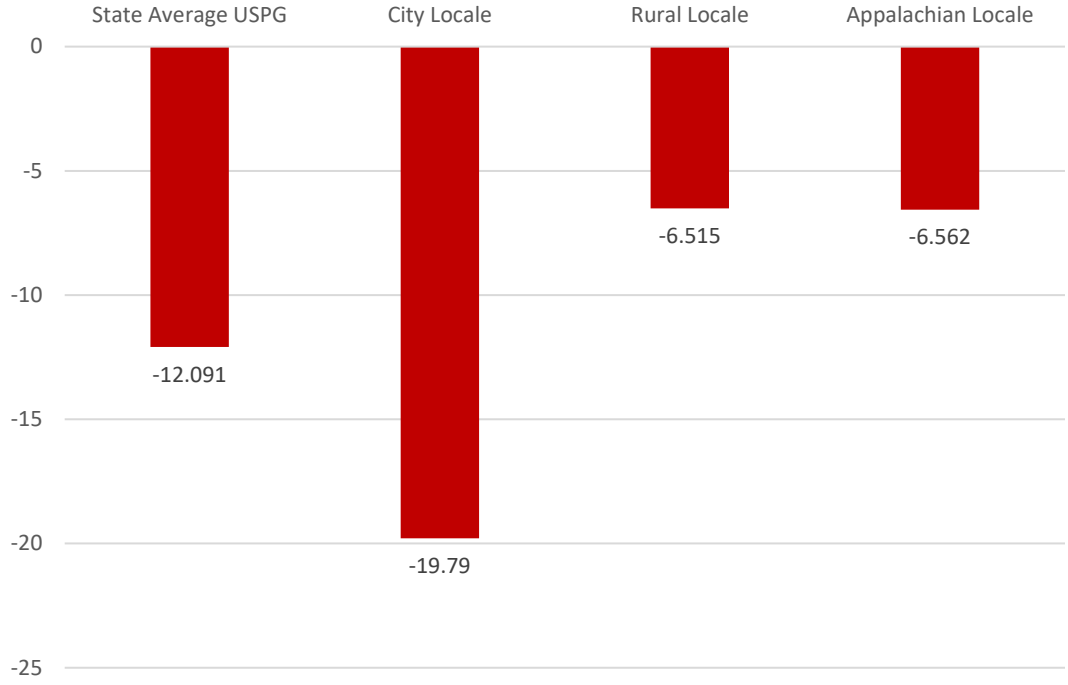
***p=0.001 **p=0.01 *p=0.05

Table 2.2 - Bivariate Regression of Variables Impacting Underserved Student Performance: Location (Standard Deviation in Parentheses)

Variable	**Model 5**	**Model 6**	**Model 7**	**Model 8**	**Model 9**
City Locale	-7.699*** (1.90)	-	-	-	-
Suburb Locale	-	-2.313 (1.52)	-	-	-
Town Locale	-	-	-1.225 (1.362)	-	-
Rural Locale	-	-	-	5.576*** (1.178)	-
Appalachian County	-	-	-	-	5.529*** (1.229)

***p=0.001 **p=0.01 *p=0.05

Figure 1 – Visualization of Table 2.2, excluding those values which are not statistically significant – Underserved Student Performance Gap (USPG)



Discussion

The differences in USPG between different locale types in Kentucky is undeniable. In City Locales, underserved students performed almost 20 points lower on average than non-underserved students. That's nearly two letter-grades (that is assuming that these schools use the traditional 10-point intervals for letter grades, i.e. 90-100 is an A, 80-89 is a B, etc.). In Rural Locales and Appalachian counties, underserved students only performed about 6.5 points lower than their non-underserved peers. It makes sense that these two numbers are so similar, as most rural communities in Kentucky are in Appalachia, and most Appalachian counties are rural areas.

At first, one might think this data suggests that students in cities are performing worse than students in rural areas, and that rural areas are doing something to minimize the effects of social distance in their schools. This is not necessarily the case. Whether or not students in either type of locale are performing better is not part of the question. These numbers show us the average *gap* between traditionally underserved students and non-underserved students in these areas. In cities, students of wildly different socioeconomic backgrounds can be enrolled in the same school, even if they are from differing neighborhoods, because they may still be in close proximity to one another. Because of this, some students have greater resources both in and outside of school, resulting in greater academic performance. Students from families of lower socioeconomic status may have to work to help their family with bills, meaning they have less time for homework, studying, and after-school extracurriculars. Many of these students may have to take the bus to school, meaning that they often have to wake up earlier, and therefor get less sleep than students whose parents drive them to school, or who drive themselves to school.

In disadvantaged rural areas, everyone has the same access to the same inferior resources. Everyone's family has been in the area for generations, and no one brings new resources into the community with them. The tax money that comes into schools is low because no one makes enough to contribute more in taxes. Less money is spent per student in these rural areas. Roscigno et al., (2006) sum up the big picture well:

> Families and schools in America's inner cities and rural places simply lack many of the resources that promote educational achievement and attainment. Families in these locales have lower family income, less parental education, and more siblings per household. Inner city schools have high concentrations of poor and non-white students. Rural schools have high concentrations of poor students and lower per-pupil expenditures. These resource shortfalls explain most inner city and rural deficits in achievement and attainment.

It is also important to note that while the USPG measures the effects of social distance *within* a school, comparing the averages of the USPG between different types of school locales measures the effects of social distance both within *and* between schools. Within, whereas underserved students are receiving less academic attention and services from their teachers than other students; and between, whereas students in rural areas have less access to quality education and resources (both physical and social) than students in more populous, affluent areas. Additionally, students in cities are confined to the aforementioned "risk spaces" and "resource spaces," which creates a greater social distance between groups of people, and therefore between different schools.

Conclusion

The effects of social distance of varying kinds is evident when examined in this way. No matter where a student is from, social distance has a hold on their school, whether they are benefitted or encumbered by it, and some areas suffer

worse than others. Underserved students in cities have the most evident deficit in academic performance, though students in rural areas suffer from the effects of social distance in academia as well, due to the fact that the communities they come from are underserved by nature, as most of the rural areas in Kentucky are in Appalachia, one of the most impoverished regions in the nation. Black students, Hispanic/Latine students, and economically disadvantaged students suffer two-fold from these factors. It was well-known long before this paper's infancy that the educational structure of America is stratified, but this should only serve as further evidence that the allocation of educational resources is grossly unjust. The United States, and particularly the Commonwealth of Kentucky, must begin the change that is required to benefit *all* students, not only the students that it is most convenient to assist.

Future Directions

Future studies could potentially include GIS analysis of economic and racial distributions throughout the state, as well as within individual counties of interest. A more qualitative, ethnographic analysis of schools in differing areas that includes interviews with students, parents, and school faculty and staff would be of interest as well.

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